UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/688,300	10/16/2003	Mei H. Sun	SENS.009US0	9197

7590 09/16/2004

PARSONS HSUE & DE RUNTZ LLP
SUITE 1800
655 MONTGOMERY STREET
SAN FRANCISCO, CA 94111

EXAMINER	
GUADALUPE, YARITZA	
ART UNIT	**PAPER NUMBER**
2859	

DATE MAILED: 09/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/688,300	SUN ET AL.	
	Examiner	Art Unit	
	Yaritza Guadalupe McCall	2859	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-27 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-12,14-21 and 23-25 is/are rejected.

7)☒ Claim(s) 13,22,26 and 27 is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 6/1/2004.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1 – 2, 4 – 9, 12, 14 – 16, 19 and 24 are rejected under 35 U.S.C. 102 (e) as being anticipated by Wenger (US 6,751,493).

Wenger discloses a sensor positioning system for holding sensor units in fixed relative locations in a detachable manner, comprising a template (11) having a first surface and a second surface that is parallel to the first surface, and cutouts (39) that extend from the first surface to the second surface; a plurality of sensor units (15) including an individual sensor unit including at least one sensor; an individual sensor unit of the plurality of sensor units being retained within a cutout such that the location of the individual sensor unit is maintained with respect to the template (See Figures 1 – 2); and a plurality of sensor leads (17, 23, 25, 27) including individual sensor leads connecting to individual sensor units. Wenger teaches a system that

provides visible markings (29, 33, 35) and the sensor units are individually identified to indicate which sensor unit corresponds to an individual predetermined location.

Wenger also discloses said individual sensor units comprising a chip of material (13, 16) in which a sensor is retained and wherein the material is chosen to be the material of a substrate to which the sensor unit may be attached or a material having higher thermal conductivity (16) then the material of the substrate; also comprising said first surface of the template being coated with an adhesive film (16) to provide a continuous tacky surface and further comprising a release layer (See Column 9 ,lines 34 – 36) applied to the tacky surface. Wenger teaches a system wherein the sensor unit is retained within the cutout by an adhesive tape (16) that extends over the sensor unit and over a portion of the second surface of the template. Wenger also discloses a system further comprising an alignment tool that aligns the template to the substrate (See Column 10, lines 33 – 37) and a release layer removal tool (41) that rolls up the release layer to expose the tacky surface.

With respect to claims 12, 14 – 16, 19 and 24 : The method of positioning sensor units on a substrate surface at predetermined locations, comprising the steps of aligning a template to the substrate surface such that the template extends across the substrate surface and individual sensor units affixed to the template are positioned at predetermined locations that are specific to the individual sensor units; detaching a sensor unit from the template; and attaching the sensor unit

to the substrate surface at the predetermined location established by the template as stated in claim 12 could be met by the regular operation of the system disclosed by Wegner. The steps of detaching a sensor unit from the template by peeling back an adhesive tape that is attached to the sensor unit and is also attached to a portion of the template so that with the tape peeled back, the sensor unit may be moved in relation to the template, and wherein attaching the sensor unit to the substrate surface is by adding a layer of bonding material between the sensor unit and the substrate surface, and wherein the bonding material is thermally conductive and a pressure sensitive adhesive could be met by the regular operation of the system disclosed by Wegner.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 3 and 17 - 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wenger (US 6,751,493) in view of Klass et al. (US 6,079,875).

Wenger discloses a system as stated in paragraph 2 above.

Wenger does not disclose the chip having a planar surface with a spiral shaped groove, wherein the sensor and a portion of the sensor lead are inserted in the spiral shaped groove and is cemented in position as stated in claim 3. Wenger does not disclose the thermally conductive bonding material contains diamond powder or silver powder as stated in claims 17 – 18.

Regarding claim 3 : Klass et al. discloses a sensor device (5) comprising a chip of material (18) having a planar surface and a spiral shaped groove wherein the sensor unit and a portion of the sensor lead (7) is provided and cemented in position. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the sensor unit disclosed by Wenger with a sensor arrangement provided in a spiral shaped groove as taught by Klass et al. in order to provide a sensor lead of a greater length in a reduced size sensor unit.

Regarding claims 17 – 18 : Wenger and Klass et al. disclose a system having a thermally conductive bonding material, i.e., hydrogel. The particular type of material used as a bonding material, absent any criticality, is only considered to be the use of a " preferred " or " optimum " material out of a plurality of well known materials that a person having ordinary skill in the art at the time the invention was made would have find obvious to provide using routine experimentation based, among other things, on the intended use of Applicant's apparatus, i.e., suitability for the intended use of Applicant's apparatus. See ***In re Leshin***, 125 USPQ 416 (CCPA 1960) where the court stated that a selection of a material on the basis of suitability for

intended use of an apparatus would be entirely obvious. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to use hydrogel as taught by Wenger and Klass et al. in order to provide a highly conductive adhesive that does not cause discomfort once placed in position and does not compromise the strength of the adhesive material.

5. Claims 10 – 11 and 20 - 21 rejected under 35 U.S.C. 103(a) as being unpatentable over Wenger (US 6,751,493) in view of Renken et al. (US 6,325,536).

Wenger discloses a device as stated in paragraph 2 above.

Wenger does not disclose the lead clamp attached to one or more leads and that is configured to be attached to a substrate as stated in claims 10 and 20. Wenger does not discloses the flat cable assembly through which the plurality of sensor leads pass and a connector to which the plurality of sensor leads attach as stated in claims 11 and 21.

With respect to claims 10 – 11, 20 – 21 and 25 : Renken et al. discloses a system for integrated sensors comprising a plurality of sensor units having a plurality of sensor leads (1030) having a lead clamp (1070)attached to the leads and configured to be attached to a substrate (1040), also comprising a connector (1020) to which the plurality of sensor leads are attached. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the

invention was made to add a lead clamp and a connector as taught by Renken et al. to the system disclosed by Wenger in order to help hold the plurality of leads in place and aid in the attachment of the leads to external processing devices.

Allowable Subject Matter

6. Claims 13, 22 and 26 – 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following references are considered of relevance to the present application :

a. Boyko et al. (US 6,214,525)

b. Mayer et al. (US 6,687,987)

c. Hayward (US 4,455,749)

d. Essary (US 5,363,561)

e. Pressey (US 4,584,780)

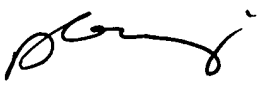
f. Warner (US 5,855,076)

g. Schroeder et al. (US 5,548,372)

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yaritza Guadalupe McCall whose telephone number is (571)272 -2244. The examiner can normally be reached on 8:00 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego F.F. Gutierrez can be reached on (571) 272-2245. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Yaritza Guadalupe-McCall
Patent Examiner
Art Unit 2859
September 13, 2004

DIEGO F.F. GUTIERREZ
SUPERVISOR PATENT EXAMINER
TECHNOLOGY CENTER 2800